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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,951	03/22/2004	Blake Edward Ratcliffe	RM.MDC	2850

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EXAMINER

AFTERGUT, JEFF H

ART UNIT	PAPER NUMBER
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1733

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/806,951

Applicant(s)

RATCLIFFE, BLAKE EDWARD

Examiner

Jeff H. Aftergut

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.K. 1,104,669 in view of German Patent 3,432,681 (note the additional machine translation of the reference supplied herewith) further taken with "My Laser Cutting Experiences" (from the website <http://www.inlay.com/cnc/laser/index.html>) for the same reasons as clearly expressed in paragraph 2 of the Office action dated 8-21-06 further taken with Matheson et al (newly cited).

The references to U.K. '669, German Patent '681 and "My Laser Cutting Experiences" are all cited for the same reasons as expressed in paragraph 2 of the Office action dated 8-21-06. The reference to German Patent '681 (two separate machine translations included herein) clearly recited that the laser cutting mechanism was capable of cutting the veneer with a cut as wide as 0.15 mm (i.e. 0.15 mm or less in width for the cuts formed therein) where the laser cutting operation was controlled via a controller 22 which was capable of reading computer image data which was previously scanned and fed to the machine (in this way reproducible inlay designs can be manufactured). Note that German Patent '681 clearly envisioned that the material being treated would have the reference to "My Laser Cutting Experiences" clearly evidenced that a computer (CAD) type arrangement would have been used to laser cut the material. The use of a computer was clearly recognized as useful means to control the laser in the cutting operation. Additionally, the scanning of an image and the feeding of

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the image data in machine code to the cutting tool (the laser) was clearly art recognized by these references. The combination did not expressly state that one skilled in the art would have readjusted the machine code coordinates prior to the cutting of the second substrate in the operation. It should be noted that this is nothing more than cleaning the machine code so that a second piece can be cut in accordance with the data previously supplied to the laser cutting device.

Matheson suggested that those skilled in the art would have directly interfaced a laser and a computer to laser cut an block in the manufacture of an inlay, column 5, lines 45-51. The reference to Matheson performed a clean up operation by printing the image to define where the cutting was to take place and that the data would have been cleaned in order to provide smooth lines (for example) in the finished assembly as well as to redirect any curves to render the same smooth in the finished data collected). The cleaning performed by Matheson was intended for the printing of the image with the laser printer. The applicant is advised that the reference to Matheson clearly expressed that the laser cutting device could be directly interfaced with the computer, see column 5, lines 45-51. Thus, the clean up of the printed image would have been performed with the data within the computer prior to the laser machining operation when no printed image was provided in the computer aided design operation. Additionally, note that the cleaning up of the image so that one is able to print the image was intended to provide an image to an optical reader which was used to direct the laser cutting operation. In other words, the cleaning up of the image followed by the printing of the same with the laser printer was intended to ensure that the laser cutting operation to follow would have

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had a smooth cut and/or contour which precisely followed the shape of the image which was being reproduced. Note that the printed image is what was used for the laser engraving (column 5, lines 55-column 6, line 6) however the reference suggested that the computer could directly interface with the laser engraving device alone. The claims at hand do not exclude the intermediate step of printing an image which as been cleaned and using this cleaned printed image in the formation of the engravings.

Additionally it should be noted that applicant's themselves formed a printed image from the cleaned data and utilized the same to verify that the image was ready for engraving, see step 115 of the specification. Incorporation of a clean up step in computer aided design is taken as well known in the art. Applicant is advised that the clean up operation performed by Matheson was clearly for facilitating a superior laser engraving and additionally that the computer with the image therein could be directly interfaced with the laser used in the engraving wherein the optical scanner could be eliminated (see column 5, lines 45-51). As such, the reference to Matheson clearly suggested that the code employed in the image formation operation of the computer aided design operation would have been readable by the laser used in the engraving operation.

Clearly, the prior art of record taught and suggested the cleaning up of the image as well as the re-adjusting of the machine code coordinates in order to provide a finished image which would have produced a superior looking engraved image. As such, the reference to Matheson suggested how one skilled in the art would have utilized a computer to form an inlaid design in a finished assembly wherein the inlay was cut after the base into which the inlay was to be disposed was cut utilizing a laser cutting

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operation. It would have been obvious to clean the image data prior to laser cutting as suggested by Matheson in order to provide a smooth and uniform cutting operation in the process of marquetry where a laser was used to cut the material in the formation of the design as taught by the combination of U.K. 1,104,669, German Patent 3,432,681 and "My Laser Cutting Experiences".

Applicant is referred to paragraph 2 of the Office action dated 8-21-06 for a discussion of the dependent claims.

Response to Arguments

3. Applicant's arguments with respect to claims 23-27 have been considered but are moot in view of the new ground(s) of rejection.

Regarding the rejection previously presented, the applicant essentially argues that because the reference to German Patent '681 suggested that the thickness of the laser cut was up to 0.15 mm in width that the reference would not have been considered useful for the marquetry operation taught by U.K. '669 as the reference to U.K. '669 performed a cutting operation with a die which removed no material from the veneers. The applicant notes that there is no reason to provide a laser cutter in U.K. '669 such as the laser cutting mechanism of German Patent '681. The applicant's arguments are not well taken and are respectfully traversed below.

To begin with, German Patent '681 provided the width of the cut as 0.15 mm as the upper limit of the width of the cut performed with the laser device. It should be noted that this is a minute amount of material being removed in the operation and that German Patent '681 established this as the upper limit for the amount of material

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removed (i.e. the reference typically would remove less material than 0.15 mm in width). Thus, the use of laser in U.K. '669 is not taught away from in the operation as only a limited amount of material was removed so that the pieces could be assembled together in a close relationship without gapping there between. Without a slight gap, it should be noted, it would become very difficult to assemble the pieces together subsequent to the cutting operation, as there was no clearance to work with to interfit the pieces.

German Patent '681 suggested that those skilled in the art would have performed the laser cutting operation with the aid of a computer and that the laser cutting operation would have provided one with labor savings as opposed to having to cut the material by hand and that the processing was easily reproducible. It is hard to imagine that one viewing the processing performed by German Patent '681 would have been unmotivated to utilize a laser for the cutting operation in light of the time and cost savings associated with the processing described therein. The applicant's argument that there is little or no motivation to make the combination is not well taken.

The applicant addresses the reference to "My Laser Cutting Experiences" and states that it does not cure the deficiencies of the other references and adds nothing to the rejection. To the contrary, the references to U.K. '669 and German Patent '681 provided the reasoning as to why one skilled in the art would have utilized a laser to cut the material therein. The reference to "My Laser Cutting Experiences" suggested what the state of the art was relative to computer aided cutting with a laser (which was suggested by German Patent '681). As there was no deficiencies in the combination of the other references, it is believed that "My Laser Cutting Experiences" provided

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additional evidence as to what means would have been available to those skilled in the art of laser cutting to cut the veneer materials therein in making the designs. The use of CAD and Corel in the design of the item and control of the laser cutting operation in accordance with "My Laser Cutting Experiences" would have improved the efficiency of the laser cutting operation and would have been performed in the operation.

No claims are allowed.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Canadian Patent 2,116,589 suggested the manufacture of a jigsaw puzzle with cutting performed via CAD laser processing.
5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 571-272-1212. The examiner can normally be reached on Monday-Friday 7:15-345 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Jeff H. Aftergut
Primary Examiner
Art Unit 1733

JHA
February 21, 2007